Forest Health Protection
Pacific Southwest Region
Northeastern California Shared Service Area

Date: May 1, 2020
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To: District Ranger, Feather River Ranger District, Plumas National Forest

Subject: Evaluation of fire-injured trees in the Big Bar project with respect to designation-by-damage guideline modification, Plumas National Forest (FHP Report NE20-01)

At the request of Dave Cooper, Sale Administrator/COR, Feather River Ranger District, and Rachel Condon, Forest Service Representative, Supervisor's Office, Danny Cluck, Forest Health Protection (FHP) Entomologist, visited the Big Bar Fire Salvage project area with forest/district staff on April 28, 2020. The objective was to evaluate the condition of fire-injured trees to determine any need to modify the current designation-by-damage harvest tree selection guidelines. Dave Cooper, Rachel Condon and Adam Lefebvre, Sale Administrator/COR, Feather River Ranger District, accompanied me to the field.

Specifically, this site visit was made to assess dead needle retention in fire-killed portions of tree crowns and any evidence of significant insect activity. This information was used to determine if the Region 5 FHP, *Marking guidelines for fire-injured trees in California* (Smith and Cluck 2011) could still be applied with a high degree of accuracy in 2020. This project is utilizing designation-by-damage (DxDam) criteria and all tree removal selections are done by the equipment operator, hand feller and/or the sale administrator. Normally fire-injured trees would be marked with paint during the first year to year and a half post-fire with harvest operations extending out 2-years or more post-fire. Salvage harvest on the Big Bar Fire Salvage project started in 2019 and will continue into 2020. Fire-injured tree selection and harvest for 2020 would fall between 18- and 21-months post-fire, slightly longer than the normal window of use of the guidelines.

Most trees within designated harvest units are dead (no green needles), either killed outright during the Camp Fire or dying from fire-injuries in 2019. For the fire-injured trees that still retain green needles, the following recommendations and modifications to the guidelines should provide for a continued high degree of accuracy in applying marking guidelines for the 2020 season.

Crown conditions and recommendations for Douglas-fir

Condition:

All dead needles had completely dropped for all trees and epicormic growth (flushing) was evident on some individuals. Fine branches representing previous live crown were evident, easy to see and consistent.

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Recommendation:

Consider portions of crown with fine branches as part of pre-fire live crown for making crown kill volume estimates. Consider post-fire epicormic flushing as part of live crown. Count entire branch as live if any green needles are present.

Crown conditions and recommendations for white fir, ponderosa pine, incense cedar and sugar pine

Condition:

Scattered remnants of dead needles remain on most trees and some still have cones attached in fire-killed portions of the crown. Fine branches were present but not as distinctive or consistent as that found on Douglas-fir making it harder to determine pre-fire live crown in the lower third. Some fine branches appear to have dropped from species such as ponderosa and sugar pine.

Recommendation:

Only consider portions of the crown with remnant dead needles and cones as part of the pre-fire live crown for making crown length kill estimates. Do not use fine branching. Count entire branch as part of pre-fire live crown if any dead needles or cones are present.

Previous guideline criteria that are still valid without modification

For all species, evidence of significant bark and/or woodboring beetle activity is still a valid criterion. One of the indicators for making the determination of significant insect activity is the presence of pouch fungus conks. These were evident on many white fir and sugar pine within harvest units.

The Region 5 FHP hazard tree guidelines (Angwin et al 2012) are still fully applicable to the project.

If you have any questions regarding this report and/or need additional information please contact Danny Cluck at 530-252-6431.

/s/ Danny Cluck

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References:

Angwin, P.A., D.R. Cluck, P.J. Zambino, B.W. Oblinger and W.C. Woodruff. 2012. *Hazard Tree Guidelines For Forest Service Facilities and Roads in the Pacific Southwest Region*. US Forest Service, Forest Health Protection, Region 5, Vallejo, CA. Report # RO-12-01. 40 p.

Smith, S.L. and D.R. Cluck. 2011. *Marking guidelines for fire-injured trees in California*. US Forest Service, Forest Health Protection, Region 5, Susanville, CA. Report # RO-11-01. 13 p.